

- (e) Discuss the role and importance of Materials and Manufacturing for the growth of any nation. Explain with suitable examples, the types of production.
- (f) Write short notes on :
- Ceramics and their applications.
 - Composite materials and their applications.

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(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 4304

Roll No.

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B.Tech.

(SEM II) EVEN SEMESTER THEORY EXAMINATION,
2009-2010

MANUFACTURING PROCESSES

Time : 2 Hours

Total Marks : 50

Note : (i) Attempt all the questions.

(ii) Be precise and scientific in writing.

SECTION-A

1. This section contains 10 questions. All questions are compulsory : (10×1=10)
- The castability of cast iron is poor. (True/False).
 - Stainless steel is an alloy steel. (True/False).
 - Define malleability.
 - Bronze is an alloy of :
 - Aluminium and zinc
 - Aluminium and nickel
 - Copper and tin
 - Copper and zinc
 - Write two casting defects.

- (f) Ductile failure occurs when a part is subjected to :
- compressive stress
 - tensile stress
 - fluctuating stress
 - uniform stress
- (g) Material removal is a :
- Machining process
 - Welding process
 - Joining process
 - Metal forming process
- (h) Hole is produced in casting with the help of _____ .
- Write two properties of molding sand.
 - Name the two major advantages in favour of powder metallurgy process.

SECTION-B

2. Attempt any three questions. (3x5=15)

- (a) Explain the following terms :
- Fatigue
 - Stiffness
 - Creep
 - Brittle fracture
 - Elasticity
- (b) Explain with neat sketch and suitable example, the stress-strain diagram of :
- ductile material and
 - brittle material

- (c) With help of neat sketch, explain the basic components of lathe machine and various operations performed on it.
- (d) Write short notes on :
- Galvanizing
 - Electroplating
- (e) Describe with suitable examples, plant layout and its different types and applications.

SECTION-C

3. Question (a) is compulsory and carries Seven marks. Attempt any three more questions from the remaining (all carry equal marks of Six). (25)

- (a) Name three alloys each of ferrous and non-ferrous metals. Write their applications.
- (b) Differentiate between hot and cold working of metals. Mention two advantages and disadvantages of each of these techniques.
- (c) Why the pattern is different from casting ? Describe with neat sketch, the various steps in casting process. What is the function of core in casting ?
- (d) How will you classify the welding processes ? Explain with suitable applications, the working principle of resistance welding.